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<b>(54) Title:</b> FIELD EMISSION DEVICES			
<b>(57) Abstract</b> <p>A field electron emission cathode is manufactured by depositing on an insulating substrate (300), by low resolution means, a sequence of a first conducting layer (301), a field emitting layer (302) and a second conducting layer (303) to form at least one cathode electrode. There is then deposited on the cathode electrode by low resolution means, a sequence of an insulating layer (304) and a third conducting layer (305), to form at least one gate electrode. The structure thus formed is then coated with a photoresist layer (306). The photoresist layer (306) is then exposed by high resolution means to form at least one group of emitting cells, the or each such group being located in an area of overlap between a cathode electrode and gate electrode. To complete the cells, the conducting and insulating layers (305, 304, 303) are etched sequentially to expose the field emitting layer (302) in the cells, and remaining areas of the photoresist layer (306) are removed. Thus, field emitting materials and devices can be manufactured using relatively low cost techniques.</p>			
<p>The diagram illustrates the five stages of manufacturing a field emission device. Stage 1 shows a substrate 300 with a first conducting layer 301, a field emitting layer 302, and a second conducting layer 303. Stage 2 shows the addition of an insulating layer 304 and a third conducting layer 305, forming a gate electrode 308 and a photoresist layer 306. Stage 3 shows the etching of layers 305, 304, and 303 to form a gate electrode 308 and a cathode electrode 309. Stage 4 shows further etching to form a gate electrode 308 and a cathode electrode 309. Stage 5 shows the final structure with a gate electrode 308 and a cathode electrode 309.</p>			